

Applicant: Gunther Durhammer  
Application Serial No.: 09/522,877  
Filing Date: March 10, 2000  
Docket No.: 283-4  
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C<sup>2</sup>  
said cellulose derivative is applied in at least two layers and provides air permeability of at least 20 CORESTA units.

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C<sup>3</sup>  
13. (Amended) A cigarette wrapper comprising a water repellant impregnation made from a cellulose derivative, wherein said cellulose derivative is applied in at least two layers and provides air permeability of at least 20 CORESTA units.

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#### REMARKS

The Office Action dated May 31, 2002 and the references cited therein have been carefully considered. In response to the Office Action, Applicant has amended Claim 6 and 13. Support for the amendment can be found throughout the application. Specifically, support can be found on page 2, lines 9 - 13 and page 3, lines 11 - 24. Claims 20 - 24 have been withdrawn from consideration by the Examiner. Accordingly, Claims 6 - 19 are pending.

A Petition for a Two-Month Extension of Time is enclosed herewith.

Claims 6-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,722,433 to Ishino et al. (hereinafter "Ishino") in view of U.S. Patent No. 5,118,533 to Saji et al. (hereinafter "Saji"). The Office Action states that Ishino teaches a paper and a cigarette made therefrom as having a coating of cellulose derivative applied

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thereon, and a permeability greater than 20 CORESTA units. The Office Action further states that Ishino discloses that the cellulose derivative is ethyl cellulose (column 10, line 16), the cellulose derivative can be applied to both sides of the paper (column 10, line 30) and the cellulose derivative is applied in a quantity greater than  $1 \text{ g/m}^2$  (column 10, line 40).

Applicant respectfully submits that Ishino teaches away from using ethyl cellulose as a water resistant layer to decrease spotting on the paper. Applicant submits that Claim 6 and Claim 13 state that the layers of paper wrapping the tobacco have a water repellant impregnation made from a cellulose derivative and that the derivative is applied in at least two layers to provide air permeability of at least 20 CORESTA units. Ishino, on the other hand, specifically discloses applying a water soluble polymer to the paper.

Ishino discloses a water dispersible sheet for cigarettes so that when water is applied to the paper, the paper will fall apart or disperse. Thus, Ishino teaches that the paper, after being coated, should have a low level of gas permeability with a property of high water dispersibility. (Column 2, line 13-18). The teaching in Ishino is to use the ethyl cellulose to improve the water dispersibility of the paper itself. Specifically in Column 10, lines 7-9, it states that a "water soluble polymer" is to be used with the paper. Ethyl cellulose can be used as a water soluble polymer as taught by Ishino, but only at a low DS value. Applicant has enclosed as Exhibit "A" a copy of a page from *Ullmann's Encyclopedia of Industrial Chemistry*, 5<sup>th</sup> Edition, volume A5, page 473, wherein it states that ethyl cellulose is water

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soluble from ethyl DS value of 0.7 up to 1.7. However, it also states that above a DS value of 1.5 the ethyl cellulose is organic soluble and not water soluble.

The use of ethyl cellulose in the Ishino reference is the opposite of the present invention, where it is used to make paper water repellant and not water soluble. Accordingly, Ishino does not teach or suggest using a cellulose derivative for water-repellent impregnation of paper as defined in Claims 6 and 13 of the present application.

The Examiner concedes that Ishino does not specifically recite that the coating is produced by applying several layers to the paper. Accordingly, the Office Action relies upon Saji for applying a coating material to paper and that the coating may be applied in a single layer or in multiple layers (column 5, line 65).

The Saji reference relates to creating a high-quality gloss paper and creating a smooth paper which is typically used for printing. Saji does not relate to cigarettes. Further, Saji does not teach or suggest using an ethyl cellulose derivative to increase the water repellency of cigarette paper to reduce spotting.

Accordingly, Applicant respectfully submits that one skilled in the art would not be motivated to combine a method of manufacturing coated smooth paper as disclosed by Saji

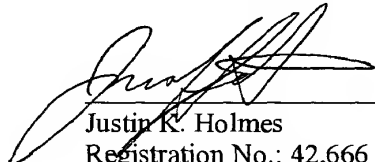
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with the Ishino teaching of a water soluble paper since both references relate to different areas of the art and would not be combined.

Applicant has enclosed a check to cover the required fee for the Petition for a Two-Month Extension of Time. No other fees are deemed necessary, if however additional fees are necessary please charge deposit account number 08-2461.

A Notice of Allowance is respectfully requested for Claims 6-19 in view of the amendment to the claims as well as the remarks set forth above. Applicant respectfully believes that the present application is in all respects in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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**VERSION OF AMENDMENT WITH MARKS**  
**TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Please amend the following claims:

6. (Amended) A cigarette comprising a tobacco strand wrapped with a layer of paper having a water repellent impregnation made from a cellulose derivative, wherein said cellulose derivative is applied in at least two [several] layers and provides air permeability of at least 20 CORESTA units.

13. (Amended) A cigarette wrapper comprising a water repellent impregnation made from a cellulose derivative, wherein said cellulose derivative is applied in at least two [several] layers and provides air permeability of at least 20 CORESTA units.